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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 1

Complete if Known

Application Number	09/987,707
Filing Date	November 15, 2001
First Named Inventor	Alan J. LIPTON et al.
Group Art Unit	2611 2613
Examiner Name	NOT YET ASSIGNED
Attorney Docket Number	37112-175340

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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
VL	AA	Alan J. Lipton "Virtual Postman-An Illustrative Example of Virtual Video," International Journal of Robotics and Automation, Vol. 15, No. 1, January 2000, pages 9-16.	
VL	AB	Alan J. Lipton, "Virtual Postman -Real Time, Interactive Virtual Video," IASTED Conference on Computer Graphics and Imaging (CGIM'99), Palm Springs, October 25-27, 1999.	
VL	AC	Robert T. Collins et al., "A System for Video Surveillance and Monitoring," Technical Report CMU-RI-TR-00-12, Robotics Institute, Carnegie Mellon University, May, 2000.	

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Sheet 1

of

2

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09/987,707

Filing Date

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First Named Inventor

Alan J. LIPTON, et al.

Group Art Unit

26H 2613

Examiner Name

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U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
VL	A1	5,956,081		KATZ, et al.	09/21/99	
	A2	3,812,287		LEMELSON	05/21/74	
	A3	6,226,388		QIAN, et al.	05/01/01	
	A4	6,177,886		BILLINGTON, et al.	01/23/01	
	A5	5,623,249		CAMIRE	04/22/97	
	A6	6,097,429		SEELEY, et al.	08/01/00	
	A7	6,091,771		SEELEY, et al.	07/18/00	
	A8	6,075,560		KATZ	06/13/00	
	A9	5,491,511		ODLE	02/13/96	
	A10	5,801,943		NASBURG	09/01/98	
	A11	5,696,503		NASBURG	12/09/97	
	A12	6,201,473		SCHAFER	03/13/01	
	A13	5,999,189		KAJIYA, et al.	12/07/99	
	A14	5,987,211		ABECASSIS	11/16/99	
	A15	5,886,701		CHAUVIN, et al.	03/23/99	
	A16	5,860,086		CRUMP, et al.	01/12/99	
	A17	5,610,653		ABECASSIS	03/11/97	
	A18	5,448,315		SOOHOO	09/05/95	
	A19	5,959,690		TOEBES, VIII, et al.	09/28/99	

FOREIGN PATENT DOCUMENTS

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		Office ³	Number ⁴	Kind Code ⁵ (if known)				

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Substitute for form 1449A/PTO		Complete if Known	
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		Filing Date	November 15, 2001
		First Named Inventor	Alan J. LIPTON, et al.
		Group Art Unit	261+ 2613
		Examiner Name	Not Yet Assigned VU LE
Sheet 2	of 2	Attorney Docket Number	37112-175340

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
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VL	A20	H. Fujiyoshi and A. J. Lipton, "Real-time Human Motion Analysis by Image Skeletonization," <u>Proceedings of IEEE WACV'98</u> , Princeton, NJ, 1998, pp.15-21.	
VL	A21	A. J. Lipton, H. Fujiyoshi and R. S. Patil, "Moving Target Classification and Tracking from Real-time Video," <u>Proceedings of IEEE WACV'98</u> , Princeton, NJ, 1998, pp.8-14.	
VL	A22	A. J. Lipton, "Local Application of Optic Flow to Analyse Rigid Versus Non-Rigid Motion," <u>International Conference on Computer Vision</u> , Corfu, Greece, September 1999.	
VL	A23	R. T. Collins, Y. Tsin, J. R. Miller, and A. J. Lipton "Using a DEM to Determine Geospatial Object Trajectories," CMU-RI-TR-98-19, 1998.	
VL	A24	A. Selinger and L. Wixson, "Classifying Moving Objects as Rigid or Non-Rigid Without Correspondences," <u>Proceedings of DARPA Image Understanding Workshop</u> , 1, November 1998, pp. 341-47.	

Examiner Signature	VU LE PRIMARY EXAMINER	Date Considered	9/27/04
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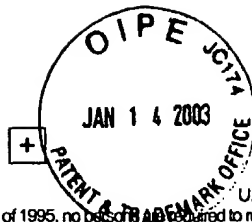
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First Named Inventor	Alan J. LIPTON
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Attorney Docket Number	37112-175340

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VL	B1	L. WIXSON ET AL., "Detecting Salient Motion by Accumulating Directionally-Consistent Flow," IEEE, 1999.	
VL	B2	W.E.L. GRIMSON ET AL., "Using Adaptive Tracking to Classify and Monitor Activities in a Site," CVPR, pp. 22-29, June 1998.	
VL	B3	A.J. LIPTON ET AL., "Moving Target Classification and Tracking from Real-time Video," IUW, pp. 129-136, 1998.	
VL	B4	T.J. OLSEN ET AL., "Moving Object Detection and Event Recognition Algorithm for Smart Cameras," IUW, pp. 159-175, May 1997.	
VL	B5	A. J. LIPTON, "Local Application of Optical Flow to Analyse Rigid Versus Non-Rigid Motion," International Conference on Computer Vision Frame Rate Workshop, Corfu, Greece, September 1999.	
VL	B6	F. BARTOLINI ET AL., "Counting people getting in and out of a bus by real-time image-sequence processing," IVC, 12(1):36-41, January 1994.	
VL	B7	M. ROSSI ET AL., "Tracking and counting moving people," ICIP94, pp. 212-216, 1994.	
VL	B8	C.R. WREN ET AL., "Pfinder: Real-time tracking of the human body," Vismod, 1995.	
VL	B9	L. KHOUDOUR ET AL., "Real-Time Pedestrian Counting by Active Linear Cameras," JEI, 5(4):452-459, October 1996.	
VL	B10	S. IOFFE ET AL., "Probabilistic Methods for Finding People," IJCV, 43(1):45-68, June 2001.	
VL	B11	M. ISARD ET AL., "BraMBLe: A Bayesian Multiple-Blob Tracker," ICCV, 2001.	

Examiner Signature	VULE PRIMARY EXAMINER	Date Considered	9/27/04
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First Named Inventor

Alan J. Lipton et al.

Group Art Unit

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Examiner Name

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FOREIGN PATENT DOCUMENTS

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Sheet 2 of 2

Complete if Known

Application Number 09/987,707
Filing Date November 15, 2001
First Named Inventor Alan J. LIPTON
Group Art Unit 2611 2613
Examiner Name To Be Assigned
Attorney Docket Number 37112-175340

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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

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VL	B12	D.M. GAVRILA, "The Visual Analysis of Human Movement: A Survey," CVIU, 73(1):82-98, January 1999.	
VL	B13	N. HAERING ET AL., "Visual Event Detection," Video Computing Series, Editor Mubarak Shah, 2001.	
VL	B14	COLLINS ET AL., "A System for Video Surveillance and Monitoring: VSAM Final Report," Technical Report CMU-RI-TR-00-12, Robotics Institute, Carnegie Mellon University, May 2000.	
VL	B15	J.P. DEPARIS ET AL., "A Device for Counting Passengers Making Use of Two Active Linear Cameras: Comparison of Algorithms," IEEE, pp. 1629-1634, 1996.	
VL	B16	C.R. WREN ET AL., "Pffinder: Real-Time Tracking of the Human Body," PAMI, vol 19, pp. 780-784, 1997.	
VL	B17	M. ALLMEN ET AL., "Long-Range Spatiotemporal Motion Understanding Using Spatiotemporal Flow Curves," Proc. IEEE CVPR, Lahaina, Maui, Hawaii, pp. 303-309, 1991.	
VL	B18	L. WIXSON, "Detecting Salient Motion by Accumulating Directionally Consistent Flow", IEEE Trans. Pattern Anal. Mach. Intell., vol. 22, pp. 774-781, Aug. 2000.	

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